SERVICE MANUAL

INTEGRATED AMPLIFIER

SANSUI AU-D101

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

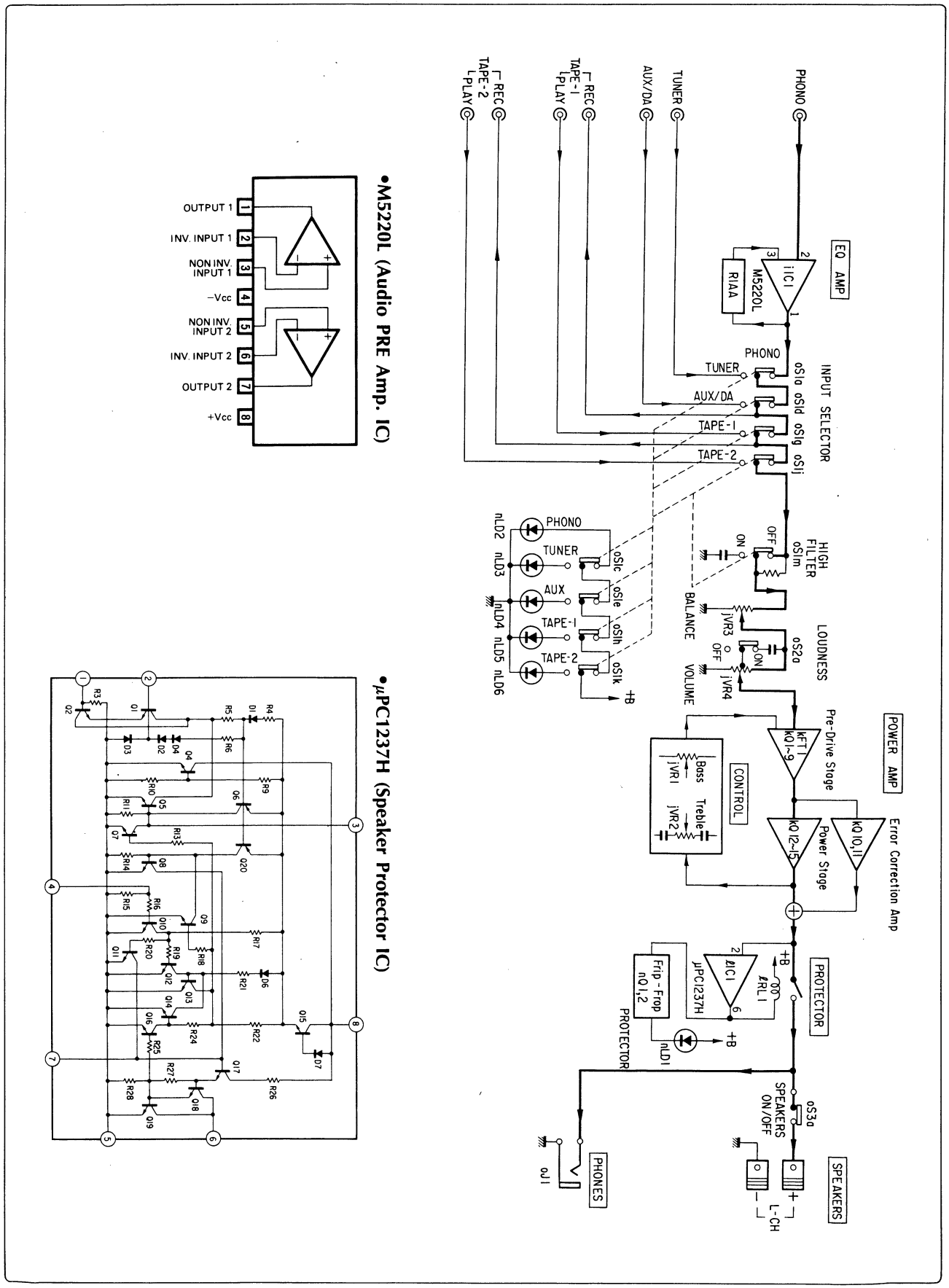
Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz with no more than 0.008% total harmonic distortion.
30 watts per channel into 8 ohms
Load impedance..... 8 ohms
Total harmonic distortion..... less than 0.008% at or below rated min. RMS power output
Intermodulation distortion
(60 Hz : 7 kHz = 4 : 1 SMPTE method)
..... less than 0.008% at rated
Frequency response (at 1 watt)
Overall (from AUX/DA) .... 20 to 250,000 Hz, +0 dB, —3.0 dB
RIAA curve deviation (PHONO, 20 Hz to 100 kHz)
..... +0.2 dB, —0.5 dB (REC OUT)
Damping factor (1 kHz, both channels driven)
..... 50 into 8 ohms
Input sensitivity and impedance (at 1 kHz)
PHONO ..... 2.5 mV/47 kilohms
(Max. input capability: 150 mV at 1 kHz, less than 0.005% total harmonic distortion)
AUX/DA, TUNER ..... 200 mV/47 kilohms
TAPE PLAY-1,2..... 200 mV/47 kilohms
Channel separation (1 kHz, at rated power output)
PHONO ..... 60 dB
Signal to noise ration (short-circuit, A-network)
PHONO ..... 83 dB
AUX/DA, TUNER ..... 100 dB
TAPE PLAY-1,2..... 100 dB
Controls
BASS..... +8 dB, —8 dB at 50 Hz
TREBLE ..... +8 dB, —6 dB at 10 kHz
LOUDNESS..... +9 dB at 50 Hz
+4 dB at 10 kHz
(VOLUME: —30 dB position)
Filter
HIGH ..... —3 dB at 10 kHz (6 dB/oct)

Others

Power voltage ..... 120/220/240 V (50/60 Hz)
Power consumption ..... 150 watts Rated
240 watts Maximum
Dimensions ..... 430 mm (16-15/16") W
76 mm (2-15/16") H
276 mm (10-7/8") D
Weight ..... 4.8 kg (10.6 lbs.) net
5.6 kg (12.3 lbs.) packed

* **Design and specifications subject to change without notice for improvements.**

1. BLOCK DIAGRAM



•M5220L (Audio PRE Amp. IC)

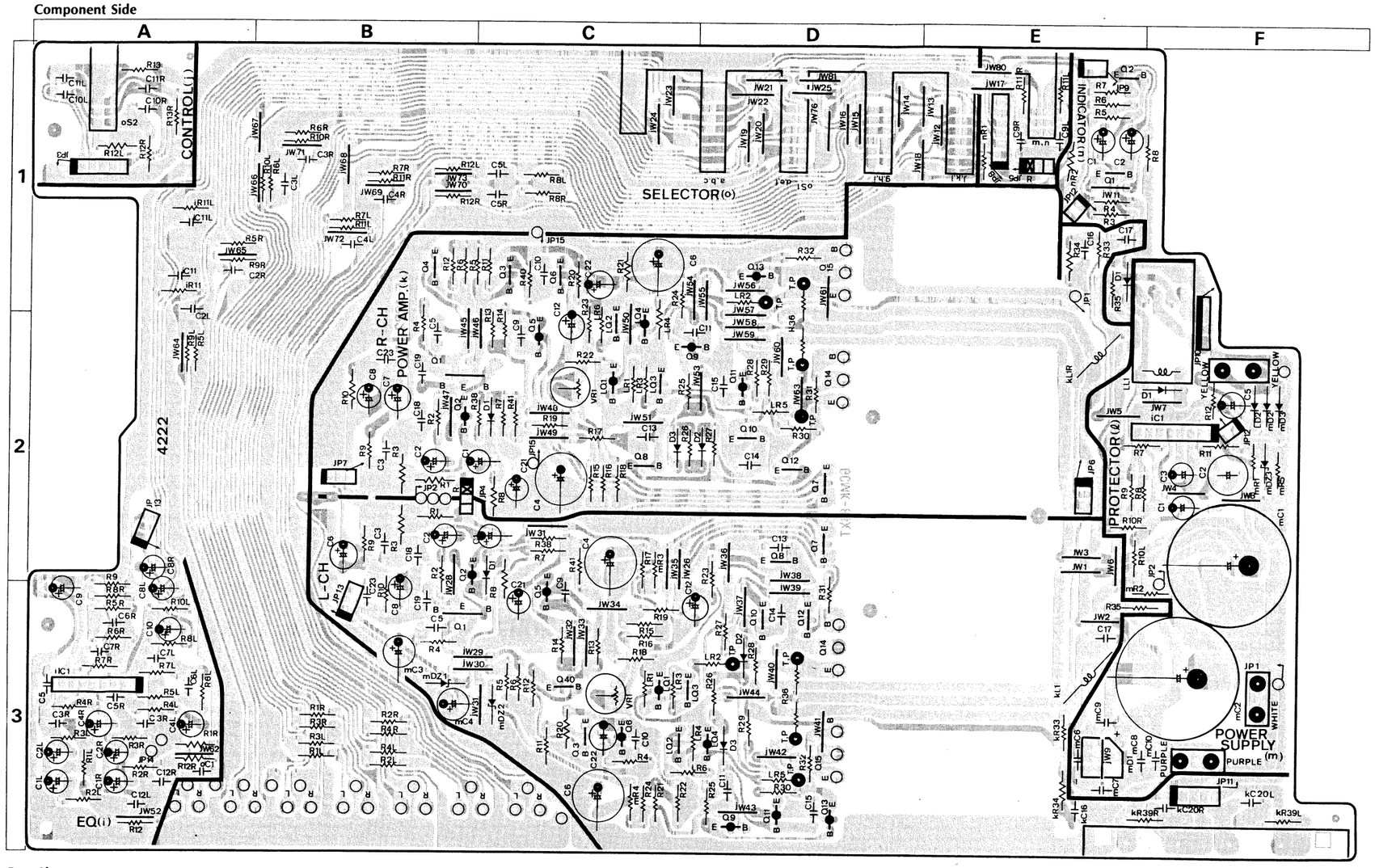
•μPC1237H (Speaker Protector IC)

2. PARTS LOCATION & PARTS LIST

2-1. F-4222 Equalizer Amp. & Power Amp. Circuit Board (Stock No. 00743301)

•Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual.

Component Side



Parts List

Parts No.	Stock No.	Description
•IC		
iIC1	46288800	M5220L
•Transistor		
kQ1	03602901	2SA798
kQ2	46392001	2SA1175
kQ3	03062801	2SC1735
	or 46127901	2SC2910
kQ4	03062801	2SC1735
	or 46127901	2SC2910
kQ5	03007901	2SA899
kQ6	03064001	2SC1904
kQ7	03068301	2SC2320
	or 03059501	2SC945
kQ8	03062801	2SC1735

Parts No.	Stock No.	Description
kQ9	03007201	2SA850
kQ10	03085201	2SD438
kQ11	03033601	2SB560
kQ12	07206401	2SD600K
kQ13	07206301	2SB631K
kQ14	03068701	2SC2577
kQ15	03011801	2SA1102
•Diode		
kD1	03117600	1S2473D
kD2	03117600	1S2473D
kD3	03117600	1S2473D
kR36	46184300	0.22Ω×2 3W Ce.R.

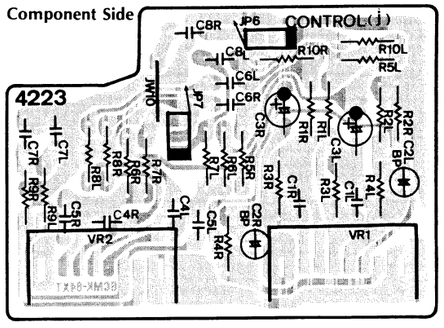
Parts No.	Stock No.	Description
kL1	46394500	Inductor Coil
	or 46394501	Inductor Coil
kVR1	10350500	470Ω(B) S.V.R., Bias adj.
•Transistor		
lQ1	46367001	2SA1115
lQ2	46367101	2SC2603
lQ3	46367101	2SC2603
lQ4	46367001	2SA1115
•IC		
lIC1	46578600	μPC1237H

Parts No.	Stock No.	Description
•Diode		
ID1	03117700	10E-2
ID2	03117600	1S2473D
IC2	08460100	100μF 6.3V E.B.
IL1	46254900	Relay AP24D2
•Diode		
mD1	46194700	RB402
mD2	03117700	10E-2
mD3	03117700	10E-2
•Zener Diode		
mDZ1	46115600	05Z22
mDZ2	46115600	05Z22
mDZ3	03178800	RD12E-B
mC1	46606500	4700μF 50V E.C.
mC2	46606500	4700μF 50V E.C.
mC6	08680300	4700pF 500V C.C.
mC7	08680300	4700pF 500V C.C.
mC8	08680300	4700pF 500V C.C.
mC9	08680300	4700pF 500V C.C.
mC10	08680400	10000pF 500V C.C.
•Transistor		
nQ1	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
nQ2	46367301	2SC2458
	or 46367101	2SC2603
	or 46391901	2SC2785
•Diode		
nD1	03117600	1S2473D
oS1	46603100	Push SW., INPUT SELECTOR, HIGH FILTER
oS2	46603000	Push SW., LOUDNESS
	46546800	6P Input Terminal, PHONO, TUNER,AUX/DA
	46363800	4P Input Terminal, TAPE-1
	46363800	4P Input Terminal, TAPE-2
	46364000	4P Speaker Terminal

•Note: The circuit board, F-4223, F-4224, F-4225, F-4225, F-4226 & F-4227 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

2-2. F-4223 BASS, TREBLE Volume Circuit Board

Component Side

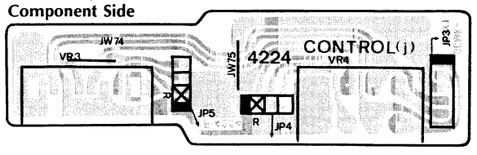


Parts List

Parts No.	Stock No.	Description
jVR1	46578800	50kΩ(C)×2 V.R., BASS
jVR2	46578800	50kΩ(C)×2 V.R., TREBLE

2-3. F-4224 VOLUME, BALANCE Volume Circuit Board

Component Side

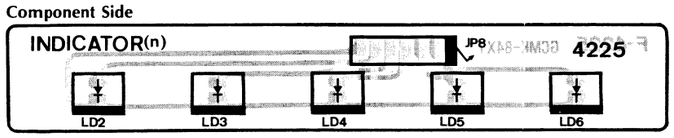


Parts List

Parts No.	Stock No.	Description
jVR3	46097500	250kΩ(MN) V.R., BALANCE
jVR4	46159900	150kΩ(B)×2 V.R., VOLUME

2-4. F-4225 PHONO, TUNER, AUX/DA, TAPE-1, TAPE-2 Indicator Circuit Board

Component Side

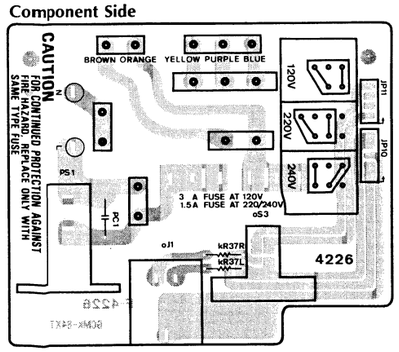


Parts List

Parts No.	Stock No.	Description
•LED		
nLD2	46173900	SLP-270C
nLD3	46173900	SLP-270C
nLD4	46173900	SLP-270C
nLD5	46174000	SLP-470C
nLD6	46174000	SLP-470C

2-5. F-4226 POWER, SPEAKERS Switch Circuit Board

Component Side

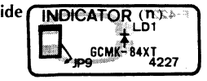


Parts List

Parts No.	Stock No.	Description
oS3	46578900	Push SW., SPEAKERS
oJ1	46096600	Jack, PHONES
pC1	46425800	10000pF 400V C.C.
pF1	07188800 07188500	Fuse 3.0A 250V (120V) Fuse 1.5A 250V (220/240V)
pS1	46360300	Push SW., POWER

2-6. F-4227 PROTECTOR Indicator Circuit Board

Component Side



Parts List

Parts No.	Stock No.	Description
•LED		
nLD1	46169300	SEL-1210S

•Abbreviations

C.R.	: Carbon Resistor	E.B.	: Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	E.BL.	: Low Leak Bi-Polar Electrolytic Capacitor
Ce.R.	: Cement Resistor		
M.R.	: Metal Film Resistor	Ta.C.	: Tantalum Capacitor
F.R.	: Fusing Resistor	F.C.	: Film Capacitor
N.I.R.	: Non-Inflammable Resistor	M.P.	: Metalized Paper Capacitor
C.C.	: Ceramic Capacitor	P.C.	: Polystyrene Capacitor
C.T.	: Ceramic Capacitor, Temperature Compensation	G.C.	: Gimmic Capacitor
		V.R.	: Variable Resistor
E.C.	: Electrolytic Capacitor	S.V.R.	: Semi Variable Resistor
E.L.	: Low Leak Electrolytic Capacitor	SW.	: Switch

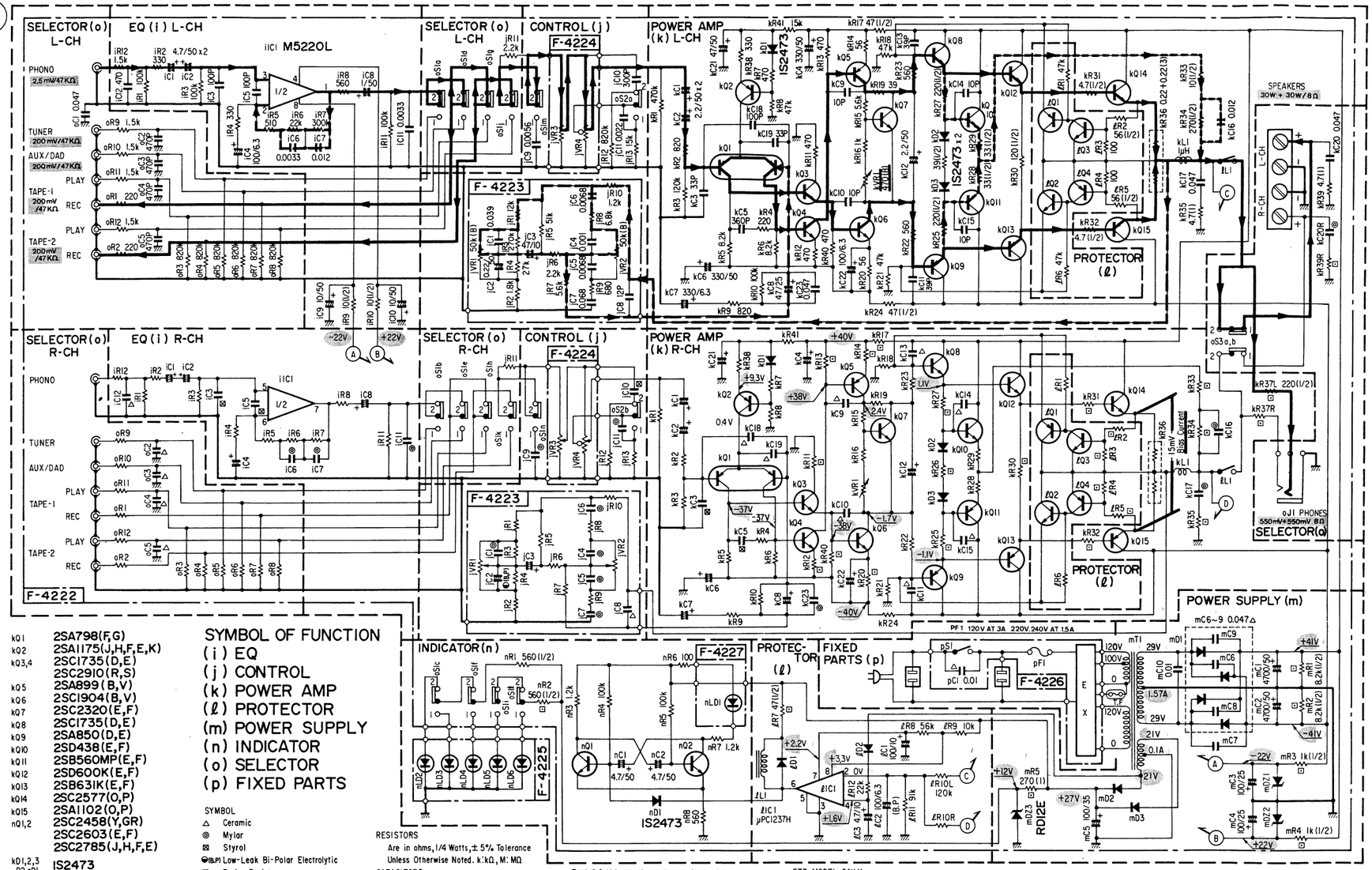
3. BIAS CURRENT ADJUSTMENT (See Top View on Page 5)

Note: 1) Room Temperature ... 18°C~28°C
2) For adjustment, run the unit for more than 3 minutes after the power is switched on.
3) Before turning ON POWER switch, turn kVR1 on F-4222 fully conterclockwise.

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	L-CH	Connect DC volt meter between emitters of kQ14(L-ch), kQ15(R-ch) on F-4222	kVR1, (L-CH) F-4222	DC 15mV	This bias current adjustment converts current value into voltage by ohms law.
2.	R-CH	Connect DC volt meter between emitters of kQ14 (R-ch), kQ15 (R-ch) on F-4222	kVR1, (R-CH) F-4222	DC 15 mV	

4. SCHEMATIC DIAGRAM

*Design and specifications subject to change without notice for improvement.
*La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
*Anderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



kQ1	2SA798(F,G)
kQ2	2SA1175(J,H,F,E,K)
kQ3,4	2SC1735(D,E)
	2SC2910(R,S)
kQ5	2SA899(B,V)
kQ6	2SC1904(B,V)
kQ7	2SC2320(E,F)
kQ8	2SC1735(D,E)
kQ9	2SA850(D,E)
kQ10	2SD438(E,F)
kQ11	2SB560MP(E,F)
kQ12	2SD600K(E,F)
kQ13	2SB631K(E,F)
kQ14	2SC2577(O,P)
kQ15	2SA1102(O,P)
nQ1,2	2SC2458(Y,GR)
	2SC2603(E,F)
	2SC2785(J,H,F,E)
kD1,2,3 D2,nD1	IS2473
mD1	RB402(LF-F)
mD2,3, D1	10E-2
mDZ1,2	05Z22-X
mDZ3	RD12E-B

SYMBOL OF FUNCTION
(i) EQ
(j) CONTROL
(k) POWER AMP
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR
(p) FIXED PARTS

SYMBOL
△ Ceramic
◎ Mylar
⊠ Styrol
(B,P) Low-Leak Bi-Polar Electrolytic
Fusing Resistor
Non-Inflammable Resistor
Cement Resistor
Non-Inductive Cement Resistor

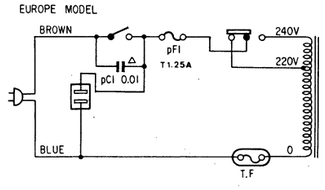
RESISTORS
Are in ohms, 1/4 Watts, ± 5% Tolerance
Unless Otherwise Noted. k: kΩ, M: MΩ
CAPACITORS
Are in μF, Unless Otherwise Noted. P: pF
TOLERANCE
J: ±5%, G: ±2%, F: ±1%

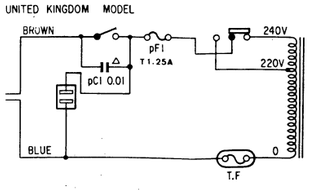
Each D.C. Voltage shows the nominal value in volts at no input signal
Electrolytic Capacitor:
Capacitance (μF) / Volt (V)

FTZ MODEL ONLY
oR9,10,11,12 mC6,7,8,9
oC2,3,4,5 iR12
kC18,19,20 iC12
kR39

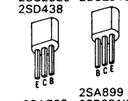
SWITCHES
• INPUT SELECTOR & HIGH FILTER
oS1a~n (F-4222)
a,b,c 1: TUNER j,k,ℓ 1: TAPE-2
2: PHONO m,n 1: HIGH FILTER ON
d,e,f 1: AUX/DAD 2: HIGH FILTER OFF
g,h,i 1: TAPE-1
• SPEAKERS oS3a,b (F-4222) 1: ON 2: OFF
• POWER PS1 (F-4226)
• VOLUME jVR4 • LOUDNESS oS2a,b (F-4222) 1: ON 2: OFF
• BALANCE jVR3
• BASS jVR1
• TREBLE jVR2

Signal Line
N.F.B Line
F.F Line

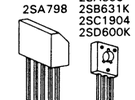
EUROPE MODEL


UNITED KINGDOM MODEL


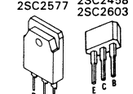
2SB560 2SA850
2SC945 2SC1735
2SC2320 2SC2910
2SD438



2SA798 2SA899
2SB631K
2SC1904
2SD600K

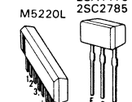


2SA1102 2SA1115
2SC2577 2SC2458
2SC2603

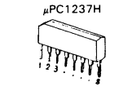


2SA1175
2SC2785

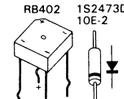
M5220L



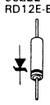
μPC1237H



RB402 1S2473D
10E-2

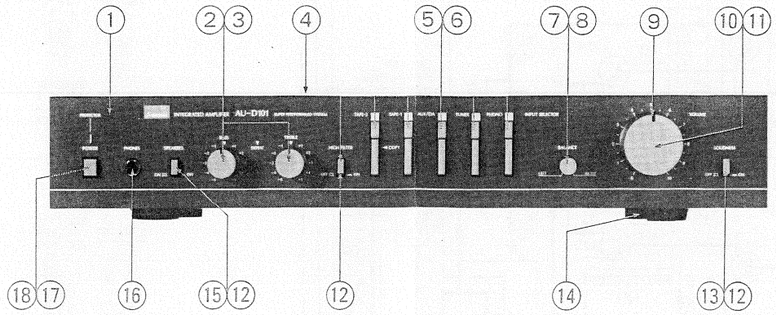


05Z22
RD12E-B

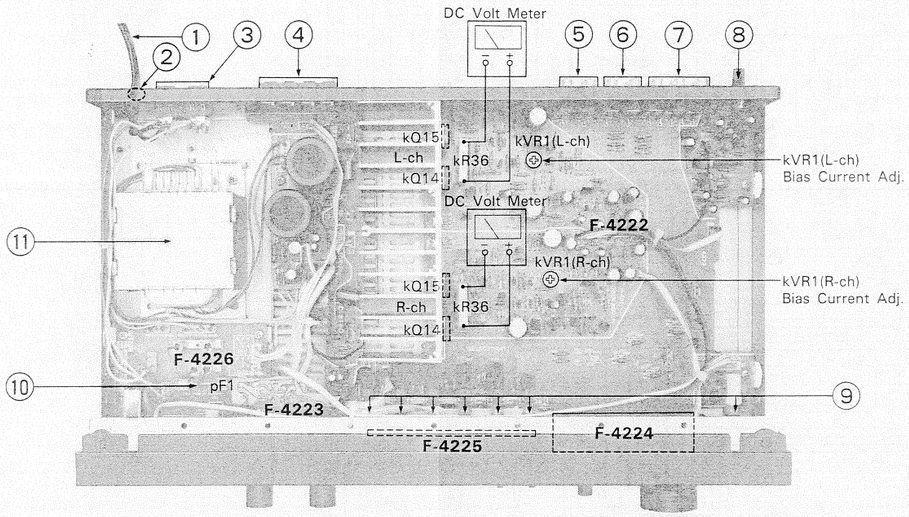


5. OTHER PARTS

5-1. Front View



5-2. Top View



Parts List <Front View>

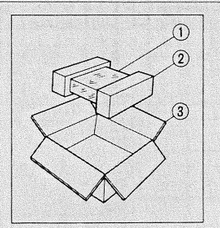
Parts No.	Stock No.	Description
1	47150600	Front Panel Ass'y
2	46578800	50kΩ(C)×2 V.R., BASS, TREBLE
3	47150300	Knob, BASS, TREBLE
4	47150900	Bonnet
5	46603100	Push SW., INPUT SELECTOR, HIGH FILTER
6	07809400	Push Knob, INPUT SELECTOR
7	46097500	250kΩ(MN) V.R., BALANCE
8	47150200	Knob, BALANCE
9	47227600	Dress Ring, VOLUME Knob
10	46159900	150kΩ(B)×2 V.R., VOLUME
11	07809000	Knob, VOLUME
12	07809610	Push Knob, LOUDNESS, HIGH FILTER, SPEAKERS
13	46603000	Push SW., LOUDNESS
14	07822700	Leg
15	46578900	Push SW., SPEAKERS
16	46096600	Jack, PHONES
17	07809800	Push Knob, POWER
18	46360300	Push SW., POWER

Parts List <Top View>

Parts No.	Stock No.	Description
1	38004700	Power Supply Cord
2	39106000	Strain Relief
3	46399400	AC Outlet
4	46364000	4P Speaker Terminal
5	46363800	4P Input Terminal, TAPE-2
6	46363800	4P Input Terminal, TAPE-1
7	46546800	6P Input Terminal, PHONO, TUNER, AUX/DA
8	22301510	GND Terminal
9	47149200	Joint Shaft
10	07188800	AC Fuse 3A 250V (120V)
	07188500	AC Fuse 1.5A 250V (220V/240V)
11	15011601	Power Transformer

6. PACKING LIST

Parts No.	Stock No.	Description
1	07599500	Vinyl Cover
2	07827200	Styrofoam Packing
3	47150100	Carton Case



7. ACCESSORY LIST

Stock No.	Description
46558900	Operating Instruction

Sansui

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
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(SM1-89) Printed in Japan (430020M) <Stock No. 36477900>